

CLAIMS:

1. Implant (1) with a receiving space (2), a therapeutic agent (3) contained therein, and an outlet element (5), wherein the outlet element (5) has pores (6) through which the therapeutic agent (3) can leave the receiving space (2) and be dispensed from the implant (1), characterized in that the therapeutic agent (3) has or produces active substance molecules (24) provided with a molecular envelope (23) in order to influence the dispensing behavior.

2. Implant per Claim 1, characterized in that the envelope (23) consists at least essentially of surfactants (25).

3. Implant per Claim 1 or 2, characterized in that the therapeutic agent (3) comprises an aqueous solution.

4. Implant per one of the preceding claims, characterized in that the active substance molecules (24) form with the envelopes (23) in particular at least essentially spherical micelles (26).

5. Implant per one of the preceding claims, characterized in that the size and/or the diameter of the envelopes (23) is adapted to the size of the pores (6) to determine the release behavior.

6. Implant per one of the preceding claims, characterized in that the smallest, average, or largest diameter of the envelopes (23) without the hydration shell is essentially at least 2-200 nm, preferably 4-50 nm and especially preferably 5-20 nm.

7. Implant per one of the preceding claims, characterized in that the envelopes (23) have an at least essentially uniform size.

8. Implant per one of the preceding claims, characterized in that the size of the envelopes (23) or micelles (26) with the hydration shell is at most $1/5$, $1/4$ or $1/3$ of the pore diameter.

9. Implant per one of the preceding claims, characterized in that the outlet element (5) is configured as a diffusion element with open pores (6) with a pore size and/or pore wall (7) that at least essentially only allows for a diffusion of the ensheathed active substance molecules (24) through the diffusion element, without enabling a free flow through the outlet element (5).

10. Implant per one of the preceding claims, characterized in that the outlet element (5) has open pores (6) with pore walls (7) that are chemically modified at least in regions, in order to interact with the ensheathed active substance molecules (24) with regard to passage through the outlet element (5).

11. Implant per one of the preceding claims, characterized in that, for the chemical modification, the pore walls (7) are configured to be hydrophilic or hydrophobic, at least in regions, and/or are provided with functional groups, at least in regions, such as amine, mercapto, carboxy and/or hydroxy groups, and/or organically modified silanes.

12. Implant per one of the preceding claims, characterized in that the outlet element (5) is configured as a membrane or a film.

13. Implant per one of the preceding claims, characterized in that the outlet element (5) consists at least essentially of ceramic or at least essentially of aluminum, magnesium, tantalum, iron, tungsten and/or titanium dioxide, preferably produced by anodization.

14. Implant per one of the preceding claims, characterized in that the outlet element (5) is configured of essentially uniform thickness and/or has a thickness of no more than $50\text{ }\mu\text{m}$, in particular not more than $5\text{ }\mu\text{m}$.

15. Implant per one of the preceding claims, characterized in that the pore diameter on average is less than 500 nm, preferably less than 250 nm, especially 250-20 nm.

16. Implant per one of the preceding claims, characterized in that the implant (1) has a solid reservoir (27), containing the active substance molecules (24) and preferably surfactant(s) (25), especially in the receiving space (2).

17. Implant per Claim 16, characterized in that the active substance molecules (24) in the receiving space (2) or during the dispensing can dissolve, preferably forming micelles (26).

18. Implant per Claim 16 or 17, characterized in that the molar ratio of the active substance molecules, (24) to the surfactants (25) in the solid reservoir (27) is at least 1:50, preferably at least 1:100 and especially at least 1:150.

19. Therapeutic agent (3), especially for release through an implant (1) of pores (6), characterized in that the therapeutic agent (3) has or produces active substance molecules (24) provided with molecular envelopes (23) made of surfactants (25).

20. Therapeutic agent per Claim 19, characterized in that the therapeutic agent (3) is an aqueous solution.

21. Therapeutic agent per Claim 19, characterized in that the therapeutic agent (3) is present as a solid, which can dissolve, in particular, to form micelles (26).

22. Therapeutic agent per one of Claims 19-21, characterized in that the smallest, average, or largest diameter of the envelopes (23) without the hydration shell is essentially 2-200 nm, preferably 4-50 nm and especially preferably 5-20 nm.

23. Therapeutic agent per one of Claims 19-22, characterized in that the envelopes (23) are at least essentially uniform in size.

24. Therapeutic agent per one of Claims 19-23, characterized in that the active substance molecules (24) form with the surfactants (25) in particular at least essentially spherical micelles (26).

25. Use of micelles (26) formed from surfactants (25) and active substance molecules (24) for modification of the diffusion behavior of the active substance molecules (24), especially during release through an implant (1) or pores (6), wherein the active substance molecules (24) are ensheathed by the surfactants (25).

26. Use per Claim 25, characterized in that the smallest, average, or largest diameter of the micelles (26) without the hydration shell is essentially 2-200 nm, preferably 4-50 nm and especially preferably 5-20 nm.

27. Use per Claim 25 or 26, characterized in that the micelles (26) are at least essentially uniform in size.

28. Micelle (26), comprising at least one active substance molecule (24), surrounded by an envelope (23) formed from surfactant(s) (25).

29. Micelle per Claim 28, characterized in that the smallest, average, or largest diameter of the micelles (26) without the hydration shell is at least essentially 2-200 nm, preferably 4-50 nm and especially preferably 5-20 nm.

30. Micelle per Claim 28 or 29, characterized in that the micelles (26) are essentially uniform in size or spherical in shape.